

SLIDE STAINER WITH REMOVABLE REAGENT CARTRIDGE FRAME

ABSTRACT OF THE DISCLOSURE

This invention describes a cartridge pump and dispensing assembly for applications where cartridges containing liquid reagents are interchanged often. The cartridge pump has a reagent reservoir which directly empties into a metering chamber. A valve is at each end of the metering chamber. The two valves are aligned in the same direction so as to allow unidirectional liquid flow. The metering chamber is made of a compressible material, such as flexible tubing, so that when an external compression is applied to the chamber, the liquid contained therein is forcibly expelled. As the compression is removed, the metering chamber resumes its former shape and draws liquid into the chamber from the reagent reservoir. A dispensing assembly with electromechanical actuators for compression of the metering chamber and a sensor for sensing the amount of liquid contained within the reagent reservoir are also shown.

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